

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Original) A method for producing 3-hydroxypropionaldehyde which comprises a step of dehydrating glycerin using a microbial cell and/or a treated microbial cell containing diol dehydratase and/or glycerol dehydratase, and optionally diol dehydratase reactivating factor and/or glycerol dehydratase reactivating factor, under conditions so as to give a value (X/Y^2) calculated by dividing a catalytic amount [X (U/g glycerin)] of diol dehydratase and/or glycerol dehydratase by square of glycerin concentration [Y (g/100 ml)] within a range of 10 to 8,000, to produce 3-hydroxypropionaldehyde.
2. (Original) A method according to claim 1, wherein the dehydration of glycerin is performed using a microbial cell under aerobic conditions.
3. (Original) A method according to claim 1, wherein the dehydration of glycerin is performed using a treated microbial cell.
4. (Currently Amended) A method for producing 1,3-propanediol which comprises a step of removing the microbial cell and/or treated microbial cell from the 3-hydroxypropionaldehyde produced by the method set forth in ~~any one of claims 1 to 3~~ claim 1, subsequently hydrogenating said 3-hydroxypropionaldehyde to produce 1,3-propanediol.
5. (Currently Amended) A method for producing 3-hydroxypropionic acid which comprises a step of oxidizing the 3-hydroxypropionaldehyde produced by the method set forth in ~~any one of claims 1 to 3~~ claim 1 to produce 3-hydroxypropionic acid.

6. (Currently Amended) A method for producing acrolein which comprises a step of reacting the 3-hydroxypropionaldehyde produced by the method set forth in ~~any one of claims 1 to 3~~ claim 1 under acidic conditions, to produce acrolein.

7. (Original) A method for producing acrylic acid which comprises a step of oxidizing the acrolein produced by the method set forth in claim 6 to produce acrylic acid.

8. (Original) A method for producing an acrylic ester which comprises a step of subjecting the acrolein produced by the method set forth in claim 6 to the oxidative esterification, to produce an acrylic ester.

9. (New) A method for producing 1,3-propanediol which comprises a step of removing the microbial cell and/or treated microbial cell from the 3-hydroxypropionaldehyde produced by the method set forth in claim 2, subsequently hydrogenating said 3-hydroxypropionaldehyde to produce 1,3-propanediol.

10. (New) A method for producing 1,3-propanediol which comprises a step of removing the microbial cell and/or treated microbial cell from the 3-hydroxypropionaldehyde produced by the method set forth in claim 3, subsequently hydrogenating said 3-hydroxypropionaldehyde to produce 1,3-propanediol.

11. (New) A method for producing 3-hydroxypropionic acid which comprises a step of oxidizing the 3-hydroxypropionaldehyde produced by the method set forth in claim 2 to produce 3-hydroxypropionic acid.

12. (New) A method for producing 3-hydroxypropionic acid which comprises a step of oxidizing the 3-hydroxypropionaldehyde produced by the method set forth in claim 3 to produce 3-hydroxypropionic acid.

13. (New) A method for producing acrolein which comprises a step of reacting the 3-hydroxypropionaldehyde produced by the method set forth in claim 2 under acidic conditions, to produce acrolein.

14. (New) A method for producing acrolein which comprises a step of reacting the 3-hydroxypropionaldehyde produced by the method set forth in claim 3 under acidic conditions, to produce acrolein.

15. (New) A method for producing acrylic acid which comprises a step of oxidizing the acrolein produced by the method set forth in claim 13 to produce acrylic acid.

16. (New) A method for producing acrylic acid which comprises a step of oxidizing the acrolein produced by the method set forth in claim 14 to produce acrylic acid.

17. (New) A method for producing an acrylic ester which comprises a step of subjecting the acrolein produced by the method set forth in claim 13 to the oxidative esterification, to produce an acrylic ester.

18. (New) A method for producing an acrylic ester which comprises a step of subjecting the acrolein produced by the method set forth in claim 14 to the oxidative esterification, to produce an acrylic ester.